

## **High Blood Pressure in Pregnancy (Source: NHLBI)**

### **What Is High Blood Pressure?**

Blood pressure is the amount of force exerted by the blood against the walls of the arteries. A person's blood pressure is considered high when the readings are greater than 140 mm Hg systolic (the top number in the blood pressure reading) or 90 mm Hg diastolic (the bottom number). In general, high blood pressure, or hypertension, contributes to the development of coronary heart disease, stroke, heart failure and kidney disease.

### **What Are the Effects of High Blood Pressure in Pregnancy?**

Although many pregnant women with high blood pressure have healthy babies without serious problems, high blood pressure can be dangerous for both the mother and the fetus. Women with pre-existing, or chronic, high blood pressure are more likely to have certain complications during pregnancy than those with normal blood pressure. However, some women develop high blood pressure while they are pregnant (often called gestational hypertension).

The effects of high blood pressure range from mild to severe. High blood pressure can harm the mother's kidneys and other organs, and it can cause low birth weight and early delivery. In the most serious cases, the mother develops preeclampsia--or "toxemia of pregnancy"--which can threaten the lives of both the mother and the fetus.

### **What Is Preeclampsia?**

Preeclampsia is a condition that typically starts after the 20th week of pregnancy and is related to increased blood pressure and protein in the mother's urine (as a result of kidney problems). Preeclampsia affects the placenta, and it can affect the mother's kidney, liver, and brain. When preeclampsia causes seizures, the condition is known as eclampsia--the second leading cause of maternal death in the U.S. Preeclampsia is also a leading cause of fetal complications, which include low birth weight, premature birth, and stillbirth.

There is no proven way to prevent preeclampsia. Most women who develop signs of preeclampsia, however, are closely monitored to lessen or avoid related problems. The only way to "cure" preeclampsia is to deliver the baby.

### **How Common Are High Blood Pressure and Preeclampsia in Pregnancy?**

High blood pressure problems occur in 6 percent to 8 percent of all pregnancies in the U.S., about 70 percent of which are first-time pregnancies. In 1998, more than 146,320 cases of preeclampsia alone were diagnosed.

Although the proportion of pregnancies with gestational hypertension and eclampsia has remained about the same in the U.S. over the past decade, the rate of preeclampsia has increased by nearly one-third. This increase is due in part to a rise in the numbers of older mothers and of multiple births, where preeclampsia occurs more frequently. For example, in 1998 birth rates among women ages 30 to 44 and the number of births to women ages 45 and older were at the highest levels in 3 decades, according to the National Center for Health Statistics. Furthermore, between 1980 and 1998, rates of twin births increased about

50 percent overall and 1,000 percent among women ages 45 to 49; rates of triplet and other higher-order multiple births jumped more than 400 percent overall, and 1,000 percent among women in their 40s.

### **Who Is More Likely to Develop Preeclampsia?**

- Women with chronic hypertension (high blood pressure before becoming pregnant).
- Women who developed high blood pressure or preeclampsia during a previous pregnancy, especially if these conditions occurred early in the pregnancy.
- Women who are obese prior to pregnancy.
- Pregnant women under the age of 20 or over the age of 40.
- Women who are pregnant with more than one baby.
- Women with diabetes, kidney disease, rheumatoid arthritis, lupus, or scleroderma.

### **How Is Preeclampsia Detected?**

Unfortunately, there is no single test to predict or diagnose preeclampsia. Key signs are increased blood pressure and protein in the urine (proteinuria). Other symptoms that seem to occur with preeclampsia include persistent headaches, blurred vision or sensitivity to light, and abdominal pain.

All of these sensations can be caused by other disorders; they can also occur in healthy pregnancies. Regular visits with your doctor help him or her to track your blood pressure and level of protein in your urine, to order and analyze blood tests that detect signs of preeclampsia, and to monitor fetal development more closely.

### **How Can Women with High Blood Pressure Prevent Problems During Pregnancy?**

If you are thinking about having a baby and you have high blood pressure, talk first to your doctor or nurse. Taking steps to control your blood pressure before and during pregnancy--and getting regular prenatal care--go a long way toward ensuring your well-being and your baby's health.

Before becoming pregnant:

- Be sure your blood pressure is under control. Lifestyle changes such as limiting your salt intake, participating in regular physical activity, and losing weight if you are overweight can be helpful.
- Discuss with your doctor how hypertension might affect you and your baby during pregnancy, and what you can do to prevent or lessen problems.
- If you take medicines for your blood pressure, ask your doctor whether you should change the amount you take or stop taking them during pregnancy. Experts currently recommend avoiding angiotensin-converting enzyme (ACE) inhibitors and Angiotensin II (AII) receptor antagonists during pregnancy; other blood pressure medications may be OK for you to use. Do not, however, stop or change your medicines unless your doctor tells you to do so.

While you are pregnant:

- Obtain regular prenatal medical care.
- Avoid alcohol and tobacco.
- Talk to your doctor about any over-the-counter medications you are taking or are thinking about taking.

## **Does Hypertension or Preeclampsia During Pregnancy Cause Long-Term Heart and Blood Vessel Problems?**

The effects of high blood pressure during pregnancy vary depending on the disorder and other factors. According to the National High Blood Pressure Education Program (NHBPEP), preeclampsia does not in general increase a woman's risk for developing chronic hypertension or other heart-related problems. The NHBPEP also reports that in women with normal blood pressure who develop preeclampsia after the 20th week of their first pregnancy, short-term complications—including increased blood pressure—usually go away within about 6 weeks after delivery.

Some women, however, may be more likely to develop high blood pressure or other heart disease later in life. More research is needed to determine the long-term health effects of hypertensive disorders in pregnancy and to develop better methods for identifying, diagnosing, and treating women at risk for these conditions.

Even though high blood pressure and related disorders during pregnancy can be serious, most women with high blood pressure and those who develop preeclampsia have successful pregnancies. Obtaining early and regular prenatal care is the most important thing you can do for you and your baby.

### **For More Information**

The NHBPEP has updated clinical guidelines on high blood pressure in pregnancy through a coordinating committee representing more than 45 medical organizations and agencies. NHBPEP is coordinated by the National Heart, Lung, and Blood Institute (NHLBI) of the National Institutes of Health. The Working Group Report on High Blood Pressure in Pregnancy (NIH Publication No. 00-3029) can be purchased through the NHLBI Health Information Network at (301) 592-8573 and is available on the NHLBI Web site at: ["http://www.nhlbi.nih.gov/health/prof/heart/hbp/hbp\\_preg.htm."](http://www.nhlbi.nih.gov/health/prof/heart/hbp/hbp_preg.htm)

*All women--and men--can take steps to prevent or manage hypertension and other cardiovascular disorders. For more information, visit the National Heart, Lung, and Blood Institute Web site at [www.nhlbi.nih.gov](http://www.nhlbi.nih.gov), or call the NHLBI Information Center at (301) 592-8573.*